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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/620,534   | 07/16/2003  | Hoi Chang            | P00620-US-00<br>(19232.0003) | 8981             |
| 22446  | 7590        | 07/06/2005           | EXAMINER                     |                  |
| ICE MILLER<br>ONE AMERICAN SQUARE<br>BOX 82001<br>INDIANAPOLIS, IN 46282 |             |                      | KIM, JUNG W                  |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 2132                         |                  |

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/620,534

Applicant(s)

CHANG ET AL.

Examiner

Jung W. Kim

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 46-53 and 56-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-53 and 56-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 46-53 and 56-62 are pending.
2. Applicant in the amendment filed on May 4, 2005 canceled claims 1-45, 54, 55 and 63-66.

### ***Election/Restrictions***

3. Applicant's election of Group III (claims 46-53 and 56-62) in the reply filed on May 4, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Information Disclosure Statement***

4. The items listed on the Information Disclosure Statement (IDS) filed on March 1, 2004 have been considered.
- 5.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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7. Claims 46 and 49-53 are rejected under 35 U.S.C. 101 because the claims are directed to nonstatutory subject matter. None of the steps of the method require the use of hardware to accomplish the respective steps; hence the claims are not tangibly embodied. It is recommended to amend the claims such that at least one of the steps includes the use of a hardware in the step and/or amend the preamble of the claims to define the method as computer implemented; for example: "A computer implemented method ...".

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 46-53 and 56-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al. USPN 5,748,741 (hereinafter Johnson).

10. As per claim 56, Johnson discloses a recordable computer readable media having a tamper resistant software program recorded thereon, comprising:

- a. a software program comprising one or more program instructions (col. 5:56-65; claim 34); and

b. a silent guard comprising one or more guard program instructions, the one or more guard program instructions installed in the software program (6:10-12; claim 1, step b).

11. As per claim 57, the rejection of claim 56 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the one or more guard program instructions are operable to evaluate the integrity of one or more data items in computer memory when the software program is running, and to take a defensive action if a deficiency in the integrity of the one or more data items is detected (col. 6:10-12; 11:59-64; 12:10-14).

12. As per claim 58, the rejection of claim 56 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the computer readable media further comprising at least one software program variable, the one or more guard program instructions being operable to assign a predetermined value to at least one of the at least one software program variables in computer memory before the software program variable is used in a computation during execution of the software program (col. 12:15-17).

13. As per claim 59, the rejection of claim 56 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the software program comprises a variable whose value is computed during execution of the software program, and wherein a defensive action results if an unexpected value of the variable is detected (col. 6:10-12; operative phrase: "at predetermined points"; 12:10-14).

14. As per claim 60, the rejection of claim 59 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the variable has an expected value, and wherein the defensive action results if a runtime value of the variable is not the same as the expected value (col. 6:10-12).

15. As per claim 61, the rejection of claim 59 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the recordable computer readable media further comprising one or more mathematical expressions inserted into one or more program instructions in the software program, the one or more mathematical expressions comprising the runtime value of the variable and the expected value of the variable, wherein correct execution of the one or more program instructions depends on the runtime value of the variable being the same as the expected value of the variable (col. 10:40-11:18; 11:65-12:14).

16. As per claim 62, the rejection of claim 59 under 35 U.S.C. 102(b) is incorporated herein. (supra) In addition, the recordable computer readable media further comprising an algorithm, wherein the defensive action results if a runtime value of the variable after the runtime value is processed through the algorithm is not the same as the expected value after the expected value is processed through the algorithm (col. 11:65-12:14).

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17. As per claims 46-52, the rejections of claims 56-62 under 35 U.S.C. 102(b) are incorporated herein. (supra) In addition, discloses means for adding the tamper resistance to a software program (col. 11:45-12:31). The aforementioned cover the limitations of claims 46-52.

18. As per claim 53, the rejections of claims 46-52 under 35 U.S.C. 102(b) are incorporated herein. (supra) In addition, implicit in the disclosure of Johnson wherein the checking codes monitor expected output of the checking cascades at predetermined points in the executable program design is the value of the output, corresponding to a variable (fig. 7), changing at least once during program execution. Hence, the aforementioned cover the limitations of claim 53.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Chow et al. USPN 6,594,761 discloses a tamper resistant software encoding using polynomials, prime number residues, converting variables to new sets of Boolean variables, and defining variables on a new n-dimensional vector space.

***Communications Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W. Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

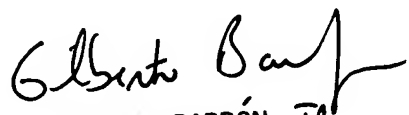
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim  
Examiner  
Art Unit 2132

Jk  
June 28, 2005



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